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EXAMINER	
GHULAMALI, QUTBUDDIN	
ART UNIT	PAPER NUMBER
2611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	09/777,203	SCHMIDL ET AL.	
	Examiner	Art Unit	
	Qutbuddin Ghulamali	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-22 and 33-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-22 and 33-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to remarks filed 3/4/2009.

Response to Remarks

2. Applicant's remarks filed 3/4/2009 have been fully considered but they are not persuasive.

The applicant's remark, see page 9, that Osthoff fail to disclose receiving end determining whether the original data bits have been received correctly in response to CRC bits. The examiner disagrees and respectfully draws applicant's attention to Osthoff, col. 1, lines 65-67; col. 2, lines 1-20, wherein Osthoff discloses that in the automatic repeat request technique ARQ the receiver RC only checks whether the information bits in the received packet are correct (the checking is done with conventional error checking algorithms, e.g. see D. Bertsekas, and R. Callager, DATA NETWORKS, 2nd edition, chapter 2, Prentice-Hall, London 1992), if not, it requests the transmitter for a retransmission of the packet, refer to fig. 8b, some information is added to the packet, called the cyclic error check CRC message which is unique for the packet information. When the CRC extraction means CRC-EX extracts this CRC-information, the packet decoder can decide whether the packet is correct or not, i.e., if the information is distorted due to errors, the CRC-information changes, which indicates to the CRC extraction means CRC-EX that an error has occurred during the transmission of the packet. When a packet is still not correct after a FEC-decoding, an entire

retransmission of not only the information bits but also the parity bits is necessary, the retransmitted packet is decoded by itself and checked, and a further retransmission request is issued, if it is not correct. Applicant remarks that Osthoff the examiner fails to find any disclosure of the foregoing emphasized limitations, see remarks page 9. The examiner most respectfully would like to draw applicant's attention to Osthoff wherein Osthoff further clearly discloses that in step ST1, a new data packet including original information bits is transmitted from the transmitter TM to the receiver RC. When the packet after transmission over the transmission link TL is first received by the receiver RC, the data packet can either contain a set of parity bits PA (either derived for the originally encoded information bits or already for the originally encoded information bits reordered according to a first reordering pattern [produces another combined set of received bits]) or no parity bits at all. Since at this initial stage in step ST2 no parity bits or at the most one single set of parity bits is available, the error correction means ERM can either perform an initial error correction of the received information bits or no error correction at all. No recursive error correction is possible at this initial stage, since at the most one single set of parity bits is available at the receiver RC. When no errors are detected by the error check means ECM in step ST3, the received information bits are decoded into a packet in step ST4, where after the transmission of the next packet takes place. When errors are detected in step ST3 and no improvement or many errors are asserted in step ST5, then a complete retransmission of the packet is requested in step ST7, however, if there is a steady improvement or only little errors experienced in step ST5, then the parity bit request means PBRM can request additional parity bits in

step ST6, in response to the parity bit request, the transmitter reorders the original information bits using a selected reordering pattern [produces another combined set of received bits] and sends parity bits for these reordered information bits to the receiver (col. 8, lines 28-58). The features of the claimed limitation as recited, reads on the claim limitation " receiving end determining whether the original data bits have been received correctly in response to CRC bits" and "receiving end combining a received version of the retransmitted original data bits".

The applicant remarks, see page 10-11, that Osthoff and Lockhart combined does not disclose "selecting one of original data bits with Cyclical Redundancy Check (CRC) bits and the parity bits in response to a first information, said data path selecting the other of the original data bits with CRC bits and the parity bits in response to a second information".

The examiner disagrees. As disclosed in Osthoff, in order to allow correction of individual packets, an aspect of the invention lies in a method for correcting information bits of a data packet, which have been subjected to errors due to a transmission of said data packet between a transmitter and a receiver, wherein the original information bits of said data packet before transmission are reordered at said transmitter using a selected reordering pattern (clearly indicates that a second information is formed after original bits are formed with parity bits as requested) in response to a parity bit request issued by said receiver (col. 3, lines 25-65).

As per applicant's remarks page 11, Osthoff does not disclose limitations recited in claims 33, 42 and 46. The limitations the applicant emphasizes regarding claims 33,

42 and 46, the applicant is referred to disclosure in Osthoff disclosed and highlighted above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 33-39, 42-51 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Rogard (US Patent 4,718,066) in view of Osthoff et al (US Patent 6,126,310).

Regarding claims 33, 42 and 46, Rogard discloses a data communications system and a method for transmission of signals from a transmitter to a receiver, the transmitter comprising:

the transmitter end applying to a plurality of original data bits that are to be transmitted to the receiving end an encoding algorithm that produces overhead bits, (encoding means for encoding a message in sets of data blocks (plurality of data bits), each block including additional check symbols enabling detection and correction within the block including redundant data blocks (col. 3, lines 20-35). Rogard however, does not explicitly show,

transmitting end transmitting the original data bits and CRC bits without the parity bits in a first transmission to the receiving end; and

transmitting end refraining from transmitting the parity bits until the transmitting end receives an indication of error in reception from the receiving end. Osthoff, in a similar

field of endeavor discloses a method of communicating data from a transmitting end (TM) to a receiving end (RC) apparatus in a mobile communication system transmitting end transmitting the original data bits without the parity bits in a first transmission to the receiving end (co. 9, lines 38-47); and

transmitting end refraining from transmitting the parity bits (the data packet can either contain parity bits as encoded with the original bits or no parity bits at all, col 8, lines 32-38) until the transmitting end receives an indication from the receiving end that the original data have not been correctly received at the receiving end (it is implied that the transmitter cannot send any information to the receiver unless the receiver due to many uncorrectable errors in the original packet or signal via the error check means (ECM) directly outputs a request ARQ for a retransmission of the packet from the transmitter, meaning that the transmitter does not (refrains) from transmitting until it gets a request from the receiver to do so) (col. 9, lines 34-47; col. 10, lines 19-29, 43-52). It would have been obvious to a person skilled in the art at the time of the invention to have the transmitter transmit original data and CRC bits without the parity bits and transmitting end refraining from transmitting the parity bits as taught by Osthoff in the system of Rogard because with specific reordering of information bits, more important bits can be placed in the data packets for a greater protection with minimum retransmission errors conserving transmission time.

Regarding claims 34 and 43, the claim is not further limiting claim 33, and having same or similar limitations as recited in claim 33, is likewise rejected.

Regarding claims 35, 48, 50 and 51, Rogard discloses all limitations of the claim above. Rogard, however, is not explicit regarding receiving end combining a received version of the original data bits and a received version of the parity bits to produce a combined set of received bits and the receiving end applying to the combined set of received bits a decoding algorithm that corresponds to said encoding. However, Osthoff discloses receiving end combining a received version of the original data bits and a received version of the parity bits, and applying to the combined set of received bits a decoding algorithm that corresponds to said encoding process (col. 8, lines 13-26; col. 10, lines 14-18). It would have been obvious to a person skilled in the art at the time the invention was made to combine received original data bits and parity bits to produce a combined set of received bits and apply it to a decoding process as taught by Osthoff in the system of Rogard because by combining and decoding together the received bits, quality of the transmission can be checked and reproduction of the original data bits can advantageously achieved.

Regarding claim 36, Rogard discloses all limitations of the claim above. Rogard, however, does not explicitly show a mapping or storing to determine operation has not resulted in the original data bits and in response to determination the receiving end combining the received version of the original received transmission with the overhead bits and applying a decoding process that corresponds to encoding process. Osthoff, however, discloses receiving end applying an error detection procedure (ECM) a mapping operation, and in response to determination the receiving end combining the received version of the original received transmission with the overhead bits and

applying a decoding process that corresponds to encoding process (col. 9, lines 34-45; col. 10, lines 14-18). It would have been obvious to a person of ordinary skill in the art at the time of the invention to apply mapping to determine operation has not resulted in the original data bits and receiving end applying an error detection procedure to the result of storing, and in response to determination the receiving end combining the received version of the original received transmission with the overhead bits and applying a decoding process that corresponds to encoding process as taught by Osthoff in the system of Rogard because by combining and decoding together the received bits, quality of the transmission can be checked and reproduction of the original data bits can be adequately achieved.

Regarding claims 37 and 44, Rogard and Osthoff disclose all limitations of the claim. The combination however, is not explicit regarding Viterbi encoding and decoding algorithms. As best understood by the examiner, the Viterbi encoding and decoding is conventionally well known and available to a person skilled in the art of signal communication to utilize because it can provide efficient and reliable data reception and transmission or encoded signals.

As per claims 38, 45 and 49, Rogard discloses all limitation of the claim above. Rogard however, is not explicit about the receiving end applying an error detection procedure to a result of decoding to determine whether decoding has resulted in original data bits and transmit to the transmitting end a request for retransmission of the original data. Osthoff in a similar field of endeavor discloses receiving end applying an error detection procedure via ECM to a result of decoding to determine whether decoding has

resulted in original data bits and transmit to the transmitting end a request for retransmission of the original data (it is implied that the transmitter cannot send any information to the receiver unless the receiver due to many uncorrectable errors in the original packet or signal via the error check means (ECM) directly outputs a request ARQ for a retransmission of the packet from the transmitter, meaning that the transmitter does not (refrains) from transmitting until it gets a request from the receiver to do so) (col. 10, lines 14-29). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the receiving end apply an error detection procedure to a result of decoding to determine whether decoding has resulted in original data bits and transmit to the transmitting end a request for retransmission of the original data as taught by Osthoff in the system of Rogard because process of early detection of errors can mitigate transmission and retransmission of message queuing and maximize response time.

As per claim 39, Rogard discloses all limitation of the claim. Rogard however, does not explicitly show transmitter end retransmitting the original data bits to the receiving end and, in response to a determination by the receiving end that said retransmission of the original data bits has not been received correctly, the receiving end combining a received version of the retransmitted original data bits with said received version of the overhead bits to produce another combined set of received bits, and the receiving end applying said decoding algorithm to said another combined set of received bits. Osthoff in a similar field of endeavor discloses transmitter end retransmitting the original data bits to the receiving end and, in response to a

determination by the receiving end that said retransmission of the original data bits has not been received correctly, the receiving end combining a received version of the retransmitted original data bits with said received version of the overhead bits to produce another combined set of received bits, and the receiving end applying said decoding algorithm to said another combined set of received bits (col. 3, lines 54-67; col. 5, lines 11-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the receiving end combining a received version of the retransmitted original data bits with said received version of the parity bits to produce another combined set of received bits, and the receiving end applying said decoding algorithm to said another combined set of received bits as taught by Osthoff in the system of Rogard because early detection of errors in the process can mitigate transmission and retransmission of message queuing and maximize channel response time.

As per claim 47, Rogard and Osthoff combined disclose all limitations of the claim except a convolutional encoding algorithm. Official Notice is taken that both the concept and the advantages of using, as convolutional encoding algorithms are conventionally well recognized in the art. Therefore it would have been obvious to a person skilled in the art at the time of invention to include convolution encoding or coding algorithm in the combined system of Rogard and Osthoff because use of convolutional algorithm for coding of signals provides a robust and reliable signal transmission.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 40 is rejected under 35 U.S.C. 102 (e) as being anticipated by Osthoff et al (US Patent 6,126,310).

Regarding claim 40, Osthoff discloses a method and system of communicating data from a transmitter to a receiver comprising:

the receiving end receiving from the transmitter a first transmission including original data bits and CRC bits (col. 1, lines 65-67; col. 2, lines 1-20) without the parity bits (col. 8, lines 13-27, 32-42), produced at the transmitting end (TR) by operation of an encoding algorithm applied to the original data bits (col. 9, lines 34-45);

receiving end determining whether the original data bits have been correctly received and responsive to a determination that the original data bits have not been received correctly, the receiving end transmitting to the transmitting end a request for transmission of the parity bits (col. 8, lines 31-47, 48-60).

7. Claim 41 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Osthoff et al (US Patent 6,126,310).

Regarding claim 41, Osthoff discloses all limitations of the claim above, except a convolutional encoding algorithm. Official Notice is taken that both the concept and the advantages of using convolutional encoding algorithm are conventionally well known and expected in the art. Therefore it would have been obvious to a person skilled in the art at the time of invention to include convolution encoding or coding algorithm in the system of Osthoff because use of convolutional algorithm for coding of signals provides a robust and reliable signal transmission.

8. Claims 10-12, 13-22 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Osthoff et al (USP 6,126,310) in view of Lockhart et al (USP 6,161,207).

Regarding claim 10, Osthoff discloses a data communication apparatus, comprising:

an input (IS) for receiving original data bits (fig. 1a, 3a) that are to be transmitted via a communication channel (TL) to another data communication apparatus (col. 8, lines 31-37; col. 9, lines 23-33);

an encoder coupled to said input for applying to the original data bits an encoding algorithm (encoding technique) that produces overhead bits (col. 1, lines 55-60; col. 2, lines 1-14, 32-46);

an output for providing bits that are to be transmitted across the communication channel (fig. 1a, 3a; col. 6, lines 9-17). Osthoff further discloses a data path coupled between said encoder and said output, said data path receiving information from said another data communication apparatus (receiver), one of the original data bits and the overhead

bits in response to a first information (ACK) (fig. 1a, 3a), data path selecting the other of the original data bits and the overhead data bits in response to a second information (col. 3, lines 25-65). However, Osthoff, does not explicitly disclose, information to be provided to said output for transmission across the communication channel to said another data communication apparatus. However, Lockhart discloses (see figs. 2, 3) data path selecting one of the original data bits and the overhead bits in response to a first information, said data path selecting the other of the original data bits and the overhead data bits in response to a second information, to be provided to said output for transmission across the communication channel to said another data communication apparatus (col. 3, lines 57-67; col. 4, lines 1-14; col. 5, lines 47-67; col. 6, lines 11-30, 42-49). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a selective transmission means to transmit the other of original data bits and overhead bits in response to a second information (negative acknowledgement NACK) as taught by Lockhart in the system of Osthoff because it can provide many of the benefits of selective retransmission without the additional overhead of prior block error detection codes with reasonably expected increase of coverage of data modem by several decibels.

Regarding claim 11, Osthoff discloses data path includes a buffer coupled to said encoder for storing the original data bits and the overhead bits (col. 6, lines 12-20).

Regarding claim 12, Osthoff discloses data path includes a selector (contolller) coupled between said buffer and said output, said selector responsive to said information for obtaining one of the original data bits with CRC bits and the parity bits

from said buffer to be provided to said output for transmission to said another data communication apparatus (fig. 1a; col. 6, lines 9-23, 40-62).

Regarding claim 13, Osthoff discloses first information includes an acknowledgement (ACK) that the information received correctly. Osthoff does not explicitly disclose second information includes negative acknowledgement indicating that an earlier transmission has not been received correctly at said another communication apparatus, said data path responsive to the negative acknowledgement for changing its selection from one of the original data bits and the overhead bits to the other of the original data bits and the overhead bits. However, Lockhart discloses (see figs. 2, 3) data path selecting one of the original data bits and the overhead bits in response to a first information, said data path selecting the other of the original data bits and the overhead data bits in response to a second information, to be provided to said output for transmission across the communication channel to said another data communication apparatus (col. 3, lines 57-67; col. 4, lines 1-14; col. 5, lines 47-67; col. 6, lines 11-30, 42-49). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a selective transmission means to transmit the other of original data bits and overhead bits in response to a second information (negative acknowledgement NACK) as taught by Lockhart in the system of Osthoff because it can provide many of the benefits of selective retransmission without the additional overhead of prior block error detection codes with reasonably expected increase of coverage of data modem by several decibels.

Regarding claims 14 and 22, Osthoff discloses a wireless communication apparatus (fig. 6)

Regarding claim 15, Osthoff and Lockhart combination disclose every feature of the claimed invention except a convolutional encoding algorithm. Official Notice is taken that both the concept and the advantages of using convolutional encoding algorithm are conventionally well known and expected in the art. Therefore it would have been obvious to a person skilled in the art at the time of invention to include convolution encoding or coding algorithm in the combined system of Osthoff and Lockhart because use of convolutional algorithm for coding of signals provides a robust and reliable signal transmission.

Regarding claim 16, Osthoff discloses a data communication apparatus comprising:

an error detector coupled to said input for determining whether the received version of the original data bits is correct (col. 6, lines 40-50); and

a controller coupled to said error detector, responsive to a determination that the received .version of the original data bits is correct for providing said first information to said another data communication apparatus, and responsive to a determination that the received version of the original data bits is incorrect for providing said second information to said another dam communication apparatus (col. 6, lines 45-67; col. 7, lines 1-5);

an input for receiving a received version of original bits in response to a first information without overhead bits produced at another data communication apparatus by operation

of an encoding algorithm applied to the original bits (col. 1, lines 55-60; col. 2, lines 1-14, 32-46; col. 8, lines 31-37; col. 9, lines 23-33). Osthoff further discloses a data path coupled between said encoder and said output, said data path receiving information from said another data communication apparatus (receiver), one of the original data bits and the overhead bits in response to a first information (ACK) (fig. 1a, 3a), however, Osthoff, does not explicitly disclose input receiving overhead bits in response to a second information to be provided to said output for transmission across the communication channel to said another data communication apparatus. However, Lockhart discloses (see figs. 2, 3) data path selecting one of the original data bits and the overhead bits in response to a first information, said data path selecting the other of the original data bits and the overhead data bits in response to a second information, to be provided to said output for transmission across the communication channel to said another data communication apparatus (col. 3, lines 57-67; col. 4, lines 1-14; col. 5, lines 47-67; col. 6, lines 11-30, 42-49). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a selective transmission means to transmit the other of original data bits and overhead bits in response to a second information (negative acknowledgement NACK) as taught by Lockhart in the system of Osthoff because it can provide many of the benefits of selective retransmission without the additional overhead of prior block error detection codes with reasonably expected increase of coverage of data modem by several decibels.

Regarding claim 17, Osthoff discloses input for receiving a received version of the overhead bits as transmitted from said another data communication apparatus, said controller coupled to said input for applying to the received version of the overhead bits a mapping (selected reordering) operation which, if the overhead bits have been received correctly at the receiving end, will result in the original data bits, said error detector coupled to said controller for applying an error detection procedure to the result of the mapping (selected reordering, arranged in a specific order or scheme) operation to determine whether the mapping operation has resulted in the original data bits (col. 6, lines 31-58; col. 9, lines 1-10, 25-33).

Regarding claim 18, Osthoff discloses a decoder (fig. 8a) coupled to input and controller, the controller responsive to a determination by said error detector that the mapping operation has not resulted in the original data bits for signaling said decoder to apply to the received version, of the original data bits and the received version of the overhead bits a decoding algorithm that corresponds to said encoding algorithm (col. 10, lines 14-64).

Regarding claim 19, Osthoff discloses a buffer coupled between said input and said decoder for storing the received version of the original bits and the received version of the overhead bits for use by said decoder (col. 6, lines 9-23).

Regarding claim 20, Osthoff discloses error detector is coupled to said decoder for determining whether said decoding algorithm has resulted in the original data bits, controller operable in response to a determination that said decoding algorithm has not resulted in the original data bits for providing for transmission to other data

communication apparatus a request for retransmission of the original data bits (col. 6, lines 45-67; col. 7, lines 1-5).

Regarding claim 21, Osthoff and Lockhart combined disclose all limitations of the claim. The combination however, is not explicit regarding a Viterbi decoder or decoding algorithm. As best understood by the examiner, Viterbi decoder for decoding is conventionally well known and readily available to a person skilled in the art of signal communication to utilize because it can provide efficient and reliable data reception and decoding of transmission encoded signals.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutbuddin Ghulamali whose telephone number is (571)-272-3014. The examiner can normally be reached on Monday-Friday, 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

QG.
May 21, 2009.

/Chieh M Fan/
Supervisory Patent Examiner, Art Unit 2611